

INDEX

DOKLADY PHYSICAL CHEMISTRY

Volumes 196-201, 1971

44-76311-11

DOKLADY PHYSICAL CHEMISTRY Volumes 196-201, 1971

(A translation of the Physical Chemistry section of Doklady Akademii Nauk SSSR)

A

Ablov, A. B. - 134
 Ablov, A. V. - 190, 426, 601, 1107
 Adler, Yu. P. - 886
 Afanas'ev, V. A. - 35
 Ageev, N. V. - 430
 Akopova, A. B. - 812
 Aksenov, V. N. - 741
 Alekseev, V. N. - 638
 Alekseev, Yu. V. - 365
 Alekseeva, V. P. - 833
 Alexeevskii, N. E. - 430
 Alfimov, M. V. - 272
 Alikhanyan, A. S. - 751
 Al'tshuler, O. V. - 112
 Alymova, A. T. - 81
 Anan'eva, L. V. - 759
 Andor, A. I. - 725
 Andreev, N. S. - 1074
 Annaev, B. A. - 790
 Antimonova, L. N. - 433
 Anufrienko, V. F. - 85, 891, 922, 1012, 1064
 Anufrieva, E. V. - 762
 Arest-Yakubovich, A. A. - 10
 Arkharov, V. I. - 692, 1031
 Arkhipov, V. A. - 408
 Arslanov, V. V. - 138, 502
 Arzamaskova, L. N. - 903
 Aslanov, Kh. A. - 793
 Auerman, L. N. - 1091
 Averbakh, É. I. - 566, 717
 Avesitov, A. K. - 118
 Azatyan, V. V. - 51
 Aziev, R. G. - 586

B

Babakhanyan, É. A. - 812
 Baberkina, G. I. - 596
 Bagdasar'yan, Kh. S. - 373, 888, 978
 Baidov, V. V. - 710
 Bainova, S. V. - 29
 Bakhimbekova, Kh. M. - 236

Baranov, V. G. - 668
 Baranova, E. K. - 847
 Baranovskii, V. I. - 849
 Barboi, B. V. - 89
 Barkalov, I. M. - 671
 Barkhash, V. A. - 355
 Baron, V. V. - 176
 Barsanov, G. P. - 1035
 Barshchevskii, B. U. - 323
 Barsova, L. I. - 348
 Bartenev, G. M. - 1042
 Bashkirov, A. N. - 16, 232
 Basov, V. P. - 335
 Batekha, I. G. - 272
 Bel'govskii, I. M. - 351, 476
 Belinskii, M. I. - 426, 1107
 Belitskii, I. A. - 933
 Belousov, I. G. - 741
 Belyaeva, A. A. - 506, 666
 Berengarten, M. G. - 984
 Berezin, I. V. - 590
 Berlin, A. A. - 141, 144
 Berlin, Al. Al. - 276, 497
 Berlin, An. A. - 643
 Berman, A. D. - 239
 Berus, E. I. - 355, 891
 Bil'danov, M. M. - 4
 Blagoi, Yu. P. - 1046
 Blyumberg, É. A. - 1077
 Blyumenfel'd, L. A. - 1049
 Bobrov, N. N. - 1012
 Bochvar, D. A. - 768
 Bogatyrev, V. L. - 385, 863
 Bogdanova, K. A. - 276
 Bogoslovskii, V. N. - 692
 Boguslavskaya, B. I. - 852
 Boiko, G. G. - 1074
 Bokhman, R. - 1049
 Bokov, N. A. - 1074
 Bokshtein, B. S. - 765, 964
 Bol'shakov, A. I. - 536
 Bol'shakov, K. A. - 433
 Bonetskaya, A. K. - 276
 Boreskov, G. K. - 55, 243, 695, 939, 1012

Borovkov, V. Yu. - 437
 Borovkova, V. A. - 888
 Brodskii, A. M. - 128, 340
 Bryk, M. T. - 26
 Bryukhova, E. V. - 653
 Buchachenko, A. L. - 1023, 1083
 Budarin, L. I. - 295
 Bukhina, M. F. - 754
 Bulgakova, G. M. - 605
 Burkhanov, G. S. - 412
 Burkova, S. G. - 38
 Buslaev, Yu. A. - 29
 Butyagin, P. Yu. - 437
 Bychkova, M. M. - 176
 Bykovskaya, L. A. - 1051
 Bylinskaya, L. A. - 58, 533

C

Chaikin, A. M. - 281, 452
 Chalykh, A. E. - 316, 659
 Charkin, O. P. - 183, 839
 Cher, L. - 45
 Cherkasov, R. A. - 302
 Chernenko, A. A. - 340, 688
 Chernov, D. B. - 999
 Chernyaeva, G. A. - 596
 Chernykh, V. G. - 359
 Chertov, V. M. - 125
 Chibisov, A. K. - 216
 Chibisov, K. B. - 544
 Chibisov, K. V. - 500, 527
 Chizhik, S. P. - 744
 Chubarova, G. V. - 754
 Chufarov, G. I. - 106, 299, 704
 Chuiko, A. A. - 1038
 Chuprina, G. O. - 1046
 Churaev, N. V. - 201
 Chuvaev, V. F. - 759

D

Dalin, M. A. - 819
 Daneliya, A. P. - 459, 747
 Danilicheva, I. I. - 1055
 Demakov, K. D. - 847
 Demin, V. B. - 299

Deryagin, B. V. - 201, 972, 1059
 Distler, G. I. - 1016
 Dmitriev, A. S. - 646
 Dobrov, I. V. - 771
 Dodonov, A. F. - 440
 Dogonadze, R. R. - 377, 569
 Dorovska, V. N. - 590
 Driatskaya, G. I. - 254
 Druin, V. A. - 1091
 Dubinin, M. M. - 456, 975
 Dubinskii, A. A. - 60
 Dushin, R. B. - 506, 629
 D'yachkova, R. A. - 1091
 D'yachkovskii, F. S. - 483
 Dyatkina, M. E. - 635, 678, 951
 Dykman, I. M. - 89
 Dzhurinskii, B. F. - 236

E

Edemskaya, V. V. - 152
 Efimov, Yu. V. - 176
 Egiazarov, B. G. - 251
 Elkin, V. V. - 638
 Él'tekov, Yu. A. - 894
 El'yashevich, G. K. - 668
 Émanuel', N. M. - 305, 519, 558, 684, 1077
 Enikeeva, G. R. - 4
 Enikolopyan, N. S. - 48, 128, 144, 276, 309, 351, 443, 497, 615, 653, 828, 1051, 1080
 Éntelis, S. G. - 512
 Erashko, I. T. - 975
 Eritsy, M. L. - 483
 Ershov, B. G. - 74, 348
 Ershova, I. G. - 201
 Esin, O. A. - 338, 961

F

Fadeev, G. N. - 1072
 Farberov, D. S. - 704
 Fedorov, G. V. - 836
 Fedoseev, D. V. - 530, 1059
 Fedyanin, V. K. - 598
 Felin, M. G. - 663
 Fialkov, A. S. - 466
 Fialkov, Yu. Ya. - 335
 Filippov, A. I. - 533
 Finkel'shtein, A. V. - 800
 Firsov, V. G. - 1009
 Fishman, A. Ya. - 299
 Fistul', V. I. - 1009
 Fok, M. V. - 573
 Fomichev, A. A. - 713
 Frenkel', S. Ya. - 668, 935
 Frolov, E. N. - 45, 180
 Frumkin, A. N. - 194, 392, 1103
 Frunze, T. A. - 1061

G

Gagarina, A. B. - 305, 558
 Galashin, E. A. - 540, 573
 Galich, P. N. - 576
 Galimov, É. M. - 1059
 Galoyan, V. S. - 972
 Gapeev, A. K. - 495
 Garibyan, G. M. - 812
 Garif'yanov, S. - 472
 Gavrilov, V. V. - 601
 Gel'd, P. V. - 299, 499
 Gel'man, A. D. - 996
 Genkin, A. N. - 852
 Gerasimov, B. G. - 141
 Gerasimov, Ya. I. - 258, 608, 632, 698
 GÉrbéléu, N. V. - 134, 190
 Gerei, S. V. - 968
 Gida, V. M. - 96
 Gimadidinov, R. Kh. - 523
 Ginzburg, A. G. - 492
 Gitis, S. S. - 291
 Gladkin, Yu. G. - 355
 Glaz, A. B. - 665
 Glazman, Yu. M. - 89
 Glazunov, P. Ya. - 786
 Glushkova, V. B. - 247
 Gofman, M. M. - 635, 951
 Gokhshtein, A. Ya. - 815
 Gol'danskii, V. I. - 45, 134, 190, 251, 309, 344, 536, 640, 671
 Gol'dberg, V. M. - 476
 Gol'dfarb, Ya. L. - 558
 Gol'din, S. I. - 947
 Gol'dshleger, N. F. - 684
 Golubev, V. A. - 96
 Golubeva, M. G. - 578
 Goncharov, E. P. - 254
 Goncharova, I. E. - 147
 Gontkovskaya, T. - 856
 Gorbatev, A. G. - 449
 Gordon, E. B. - 269
 Gorokhovatskii, Ya. B. - 968
 Goroshko, L. V. - 675
 Gorskii, V. G. - 588
 Goryacheva, V. I. - 258, 608, 632
 Goryaga, A. N. - 495
 Govor, G. A. - 22
 Gragerov, I. P. - 1023
 Grigor'eva, G. A. - 408
 Grinberg, O. Ya. - 60
 Grishina, A. D. - 721
 Gryazev, N. N. - 480, 886
 Gul', V. E. - 578
 Gurman, V. S. - 149
 Guseva, L. I. - 779
 Gvozdev, B. A. - 1091

H

Hiller, S. A. - 665
 Ho Shih Thoang - 388

I

Il'in, E. G. - 29
 Il'yasov, A. V. - 472
 Iogansen, A. V. - 204
 Iogansen, L. V. - 584
 Ione, K. G. - 1012
 Irzhak, V. I. - 443, 1080
 Ishbaev, A. I. - 793
 Ishmaeva, É. A. - 63, 302
 Ivanchev, S. S. - 725
 Ivanov, E. V. - 134
 Ivanov, I. D. - 7
 Ivanov, V. I. - 35
 Ivanov, V. P. - 251
 Ivanov, V. V. - 653
 Ivanova, A. B. - 744
 Ivanova, T. I. - 502

K

Kabakchi, S. A. - 554
 Kabanov, V. A. - 590
 Kabanov, V. Ya. - 486, 822
 Kadievskii, G. M. - 4
 Kagan, A. S. - 1051
 Kagan, N. M. - 744
 Kagarlitskaya, I. V. - 326
 Kalechits, I. V. - 684
 Kalinenko, R. A. - 843
 Kalinichev, A. I. - 701
 Kal'manson, E. V. - 544
 Kamenskaya, A. N. - 1091
 Kamenskii, I. V. - 362
 Kaminskaya, E. G. - 291
 Kaminskii, A. Ya. - 291
 Kamyshov, V. M. - 106, 449
 Kamzolkin, V. V. - 16
 Kanaev, A. A. - 1002
 Kaplan, A. M. - 671
 Kapralova, G. A. - 281, 452
 Karapetyan, Yu. A. - 335
 Karimova, A. F. - 32
 Karyakin, N. V. - 867
 Kazakevich, A. G. - 1051
 Kazanskaya, A. S. - 446
 Kazanskii, K. S. - 1068
 Kazarinov, V. E. - 392
 Kedrina, N. F. - 309
 Kenarov, A. V. - 668
 Khafizov, Kh. - 402
 Khaibullin, I. B. - 847
 Khaikin, B. I. - 957
 Khairutdinov, R. F. - 640, 882
 Khalitov, F. G. - 302

Khalturinskii, N. A. - 396
 Kharkats, Yu. I. - 569
 Kharson, M.S. - 992
 Khasanov, V. G. - 523
 Khatami, A. I. - 492
 Khidekel', M. L. - 684
 Khlynov, V. V. - 338
 Khodakov, G. S. - 562
 Khokhlova, G. I. - 999
 Kholmogorov, V. E. - 804
 Khripun, M. K. - 469
 Khvoshchev, S. S. - 198, 914
 Kiperman, S. L. - 992
 Kiprianova, L. A. - 265
 Kirsh, Yu. É. - 590
 Kiryukhin, D. P. - 671
 Kiryukhin, Yu. I. - 978
 Kiselev, A.V. - 894
 Kiselev, V. N. - 406
 Klassen, V. I. - 326
 Knobel', Yu. K. - 509
 Knots, L. L. - 638
 Kochanova, L. A. - 808
 Kochetov, E. V. - 828
 Kochkin, D. A. - 822
 Kogan, V. A. - 612
 Kogan, Ya. I. - 208
 Kokhan, R. F. - 1002
 Koldaeva, O. V. - 344
 Kolesnikov, A. P. - 488
 Komissarova, L. N. - 495
 Kompaniets, L. V. - 615
 Kon', M. Ya. - 459
 Kondrikov, B. N. - 212
 Kononov, O. V. - 1035
 Kononyuk, V. F. - 456
 Konshtein, S. E. - 98
 Kontorovich, S. I. - 66
 Korchak, V. N. - 878
 Korchazhkin, V. V. - 1020
 Koretskii, A. F. - 328
 Kornienko, G. N. - 351, 476
 Kornilov, I. I. - 999
 Kornilov, A. N. - 930
 Korochuk, S. I. - 843
 Korosteleva, R. I. - 738
 Korotina, T. I. - 1099
 Korshak, V. V. - 768, 833, 867
 Korshunov, L. I. - 688
 Kostrovskii, V. G. - 359
 Kostyanovskii, R. G. - 402, 713
 Kotel'va, R. V. - 692
 Kotosonov, A. S. - 70
 Kotov, B.V. - 381
 Kovarskii, A. G. - 38
 Kovarskii, A. L. - 1083
 Kovriga, V. V. - 955

Kozlov, P. V. - 147
 Kozlova, N. D. - 176
 Kozyrev, B. M. - 32, 58, 472, 533
 Kraboviyak, M. G. - 762
 Krasotkina, I. A. - 476
 Krichevskii, I. R. - 160
 Krongauz, E.S. - 768
 Krotova, N.A. - 625
 Kruchinin, V. T. - 618
 Kruglitskii, N. N. - 164
 Kruglyakov, P. M. - 328
 Krunchak, V. G. - 226, 332
 Krutkina, M. N. - 29
 Krylov, O. V. - 643
 Krylova, G. P. - 867
 Krysanov, S.A. - 272
 Kuak Dang Cheu - 168
 Kucheruk, D. D. - 729
 Kudryavtsev, Yu. P. - 446
 Kukushkin, A. K. - 1049
 Kulis, Yu. Yu. - 824
 Kul'man, R.A. - 41
 Kul'skii, L. A. - 675
 Kunin, L. L. - 594, 710, 1097
 Kuptsov, Yu. D. - 944
 Kursanov, D. N. - 492
 Kurushin, Yu. N. - 406
 Kur'in, A.B. - 338
 Kuz'min, M. G. - 779, 824
 Kuz'min, V. A. - 216
 Kuz'minskii, A.S. - 754
 Kuz'minshchev, V.A. - 412
 Kuznetsov, A. M. - 377
 Kuzub, L. I. - 443, 1080

L

Lapatukhin, I. V. - 326
 Lapina, V. A. - 362
 Laskorin, B. N. - 102
 Lavrona, K. A. - 66
 Lavrov, N. V. - 115
 Lavrovskaya, G. K. - 440
 Lavrovskii, K. P. - 843
 Lazarev, A.V. - 284
 Le Suan Ngok, 586
 Lebedev, Ya. S. - 60
 Lebedev, Yu. A. - 509
 Lebedinskaya, M. L. - 955
 Leikis, D. I. - 638
 Leipunskii, I. O. - 547
 Leipunskii, O. I. - 400
 Leon'tev, V. B. - 793
 Leshchenko, A. V. - 1055
 Levit, A. F. - 1023
 Librovich, N. B. - 551
 Lidorenko, N. S. - 744, 1087
 Likhtenshtein, G. I. - 45, 180
 Lilich, L. S. - 469

Linshits, L. R. - 423
 Lipatov, Yu. S. - 515
 Litvinov, V. P. - 558
 Logachev, V. S. - 646
 Loshkarev, Yu. M. - 649
 Lovachev, L. A. - 856
 Lunin, A.F. - 359
 Lur'e, E.G. - 955
 Lyalina, N. M. - 1042
 Lyapina, S. S. - 1055
 Lyubman, N. Ya. - 385
 Lyubomirova, O. I. - 717

M

Madumarov, A. K. - 569
 Magradze, N.V. - 812
 Maiorov, V.D. - 551
 Maizus, Z. K. - 519, 605, 684
 Makarov, A.S. - 164
 Maksimov, N. G. - 1012
 Maksimov, Yu. V. - 843
 Malakhova, L. I. - 1053
 Malaya, R.V. - 649
 Malinin, N. K. - 588
 Maloshuk, Yu. S. - 944
 Mal'tsev, A. K. - 1027
 Mal'tsev, E. I. - 783
 Mamedov, É. A. - 243
 Mangasaryan, N. A. - 819
 Mank, V.V. - 729
 Mardaleishvili, R. E. - 459, 747
 Margolina, E. M. - 281, 452
 Marinova, R. M. - 744
 Markevich, M. A. - 828
 Markevich, S. V. - 947
 Marshneva, V. I. - 695
 Martinek, K. - 590
 Mashchenko, V. M. - 1038
 Maslovskaya, R. S. - 220
 Mastikhin, V. M. - 903
 Matros, Yu. Sh. - 588
 Matskevich, E. S. - 675
 Mekhtiev, K. M. - 819
 Mekhtieva, V. L. - 819
 Meleshko, V. P. - 81
 Melikhov, I. V. - 732
 Melkumyan, L. V. - 812
 Men', A. N. - 106, 299, 406, 449, 704, 988
 Men', B. A. - 704
 Merzhanov, A. G. - 254
 Merzlyakov, A.V. - 594, 1097
 Mikaélyan, R. G. - 1027
 Mikbailenko, I. E. - 463
 Mikhailov, A. I. - 223, 536, 640, 882
 Mikhailov, I. D. - 488

Mikhailov, N. V. - 1053
 Mikhailovskii, Yu. N. - 220
 Mikheev, N. B. - 1091
 Milkova, L. N. - 601
 Miller, B. V. - 152
 Minkin, V. I. - 707
 Mnatsakanyan, R. M. - 656
 Moiseev, S. G. - 359
 Moiseev, Yu. V. - 396
 Mokul'skii, M. A. - 831
 Molin, Yu. N. - 891
 Morikov, Yu. D. - 1077
 Moroz, N. K. - 933
 Morozov, I. I. - 440, 547
 Morozov, Yu. L. - 38
 Morozova, I. S. - 653
 Moshkov, V. V. - 1020
 Moskalenko, L. N. - 10
 Moskvina, V. V. - 1016
 Muratov, V. M. - 156, 774
 Muratova, A. A. - 32
 Mutushkin, A. A. - 1094
 Myasnikov, I. A. - 897

N

Nalbandyan, R. M. - 1094
 Natanson, É. M. - 26
 Naumov, V. A. - 859
 Nebylitsyn, B. D. - 732
 Nechaev, Yu. A. - 449
 Nefedov, O. M. - 1027
 Nefedova, M. N. - 492
 Nekipelova, T. D. - 305
 Nekrasov, A. V. - 497
 Nekrasova, V. K. - 7
 Neimark, I. E. - 125, 576
 Nikiforov, E. V. - 506
 Nikitin, E. E. - 13, 92
 Nikolaev, A. V. - 385, 863
 Nikolaev, L. A. - 1072
 Nikolaev, N. I. - 408
 Nikolaeva-Fedorovich, N. V. - 1103
 Nikol'skaya, A. V. - 258, 608, 632, 698
 Nikol'skii, B. P. - 109, 226, 332
 Novak, F. I. - 16
 Novikov, G. V. - 45
 Novokhatskii, I. A. - 1031
 Novotortsev, V. M. - 615
 Nuretdinov, I. A. - 981

O

Obmoin, B. I. - 933
 Obukhov, Yu. V. - 1009
 Ofitserov, A. A. - 710
 Oganessov, S. S. - 359
 Ogarev, V. A. - 138, 502

Oleinik, É. F. - 615
 Onishchuk, V. A. - 1087
 Orazmuradov, O. A. - 122
 Orel, M. A. - 326
 Orlova, M. M. - 996
 Osipov, O. A. - 612
 Osokin, D. Ya. - 981
 Ostapenko, É. G. - 558
 Ostrovskii, V. E. - 172
 Ostrovskii, V. S. - 362
 Ovcharenko, F. D. - 122, 729, 874
 Ovchinnikov, I. V. - 58, 533
 Ovchinnikov, V. V. - 302
 Ozhegov, P. I. - 594, 1097

P

Pal'chevskii, V. V. - 109, 226, 332
 Pan, V. M. - 416
 Panesh, A. M. - 897
 Panidi, I. S. - 446
 Pankrat'ev, Yu. D. - 55
 Papisova, V. I. - 149
 Pashchenko, V. P. - 692
 Paushkin, Ya. M. - 359, 446
 Pavlinova, T. N. - 220
 Pavlov, V. V. - 1038
 Pavlyuchenko, M. M. - 229, 681
 Ped'ko, A. V. - 495
 Pertsov, N. V. - 369, 618
 Petri, O. A. - 194
 Petrova, G. A. - 1055
 Petryanov, I. V. - 596
 Petukhov, S. V. - 469
 Petukhova, G. N. - 1103
 Pikaev, A. K. - 74, 554, 786, 996
 Pikel'ni, V. F. - 888
 Piontkovskaya, M. A. - 576
 Pirogova, G. N. - 738
 Pisarev, Yu. N. - 744
 Pis'men, L. M. - 98
 Plavnik, G. M. - 66
 Plechova, O. A. - 615
 Pogodin, Yu. V. - 1035
 Pokhil, P. F. - 646
 Pokrovskii, B. I. - 495
 Poluéktov, V. A. - 771
 Polyanskaya, N. D. - 530
 Ponomarenko, A. T. - 48, 497
 Ponomarev, A. N. - 269
 Popov, A. A. - 512
 Popov, B. G. - 115
 Popov, Yu. A. - 365
 Popova, G. Yu. - 348
 Popovskii, V. V. - 243
 Portyanskii, A. E. - 819
 Potapov, V. K. - 900

Pravednikov, A. N. - 381
 Predtechenskii, Yu. B. - 506, 629
 Priselkov, Yu. A. - 621
 Privalko, V. P. - 515
 Privalova, L. G. - 684
 Prodan, E. A. - 229, 681
 Prokhorov, V. S. - 1059
 Pshenova, K. V. - 1094
 Pritsyna, N. V. - 1068
 Puchkov, V. M. - 400
 Pudovik, A. N. - 302
 Pudovnik, A. N. - 63
 Pudovnik, M. A. - 63
 Puntezhis, S. A. - 74

R

Rabinovich, I. B. - 867
 Radtsig, V. A. - 625
 Raevskii, O. A. - 302
 Rafikova, V. S. - 519
 Raikhman, L. M. - 790
 Rakhlevskaya, M. N. - 480, 886
 Rakova, G. V. - 276
 Ramm, K. S. - 935
 Ranogaets, F. - 828
 Rastrigin, L. A. - 665
 Razvadovskii, E. F. - 615
 Rebinder, P. A. - 66, 320, 808, 1002
 Rekasheva, A. F. - 265
 Rochev, V. Ya. - 309
 Roginskii, S. Z. - 112
 Roskin, E. S. - 935
 Rozantsev, É. G. - 96, 790
 Rozenberg, E. L. - 635, 678, 951
 Rozenberg, M. Sh. - 204
 Rozenblit, A. B. - 665
 Rozenfel'd, I. L. - 186
 Rozenfel'd, S. Sh. - 326
 Rozenkevich, N. A. - 1091
 Rozhkova, É. V. - 968
 Rozlovskii, A. I. - 19, 523
 Rozovskii, A. Ya. - 232
 Rudakov, E. S. - 903
 Rudakova, R. I. - 903
 Rudnitskii, L. A. - 984
 Rumanov, E. N. - 957
 Rumer, I. A. - 1091
 Rumyantseva, G. A. - 480, 886
 Ruuge, É. K. - 1049
 Ryabinina, S. A. - 735
 Ryabinina, T. I. - 894
 Ryabtseva, N. V. - 446
 Rzvodovskii, E. F. - 497

S

Sadakova, V. N. - 186
 Sadovskii, B. F. - 596

Sadykov, A. S. - 793
 Safin, I. A. - 981
 Sakharova, L. I. - 141
 Salikhov, Sh. I. - 793
 Samchenko, I. P. - 265
 Samoilov, V. - 466
 Sanaya, I. F. - 309
 Sapozhnikov, V. N. - 867
 Sarakhov, A. I. - 456
 Sarukhanov, M. A. - 326
 Sarybaeva, R. I. - 35
 Savenko, V. I. - 808
 Savitskii, E. M. - 176, 412
 Seleznev, V. A. - 112
 Semashko, V. N. - 859
 Serb-Serbina, N. N. - 320
 Serebryakov, B. R. - 819
 Serebryanyi, A. M. - 656
 Serednitskaya, M. A. - 313
 Sergeev, V. A. - 867
 Sergeev, V. M. - 1035
 Sergin, B. I. - 988
 Setkina, V. N. - 492
 Sharmarai, V. F. - 430
 Shantarovich, P. S. - 344
 Shantarovich, V. P. - 251, 344
 Shaper'ko, N. N. - 408
 Shapkhayev, É. G. - 316
 Sharov, A. F. - 288
 Sharpatyi, V. A. - 910, 926, 947
 Shatalov, A. Ya. - 81
 Shatrov, V. D. - 269
 Shaulov, A. Yu. - 128
 Shchebak, S. N. - 612
 Shchegrov, L. N. - 131
 Shcherba, L. D. - 506, 629
 Shcherbakova, L. G. - 247
 Shchukin, E. D. - 66, 369, 618, 808
 Shekk, Yu. B. - 272
 Shestakova, N. A. - 1012
 Sheveleva, T. V. - 762
 Shilov, A. E. - 419
 Shilov, V. N. - 918
 Shinyaev, A. Ya. - 999
 Shirshov, E. M. - 786
 Shishkovskii, G. K. - 320
 Shivrin, G. N. - 102
 Shklyaev, A. A. - 85, 891, 922, 1064
 Shlyapnikov, Yu. A. - 152
 Shokova, É. A. - 1103
 Shol'ts, V. B. - 751
 Shoshenkova, V. A. - 735
 Shub, B. R. - 878
 Shubaeva, M. A. - 198
 Shubin, V. N. - 1061
 Shul'gina, I. L. - 643

Shteinberg, A. S. - 254
 Shteinman, A. A. - 92, 419
 Shupik, A. N. - 605, 1068
 Sibirskaya, G. K. - 554, 786
 Sidorenko, Yu. N. - 576
 Sidorov, L. N. - 751
 Sidorova, L. P. - 486
 Sidorova, T. T. - 212
 Simkin, B. Ya. - 707
 Simkin, N. M. - 961
 Simonishvili, T. V. - 78
 Sinevich, E. A. - 369
 Sinitsyn, N. M. - 433
 Sinitsyna, Z. A. - 373
 Sinyak, Yu. E. - 643
 Sirot, N. N. - 22
 Sirot, T. V. - 558
 Sizova, O. V. - 849
 Skibida, I. P. - 519, 605
 Sklyarenko, I. Ya. - 621
 Skuratovskii, I. Ya. - 831
 Sladkov, A. M. - 446
 Slin'ko, M. G. - 588
 Smelkov, G. I. - 115
 Smirnov, B. N. - 466
 Smirnov, M. V. - 288
 Smirnova, N. A. - 796, 706
 Smurova, L. A. - 558
 Snagovskii, Yu. S. - 118
 Snetkova, L. P. - 649
 Snezhko, N. I. - 759
 Sobolev, B. V. - 251
 Sokolinskaya, I. I. - 160
 Sokolov, L. N. - 710
 Sokolova, N. P. - 1002
 Sokolova, S. I. - 385
 Sokol'skaya, A. M. - 735
 Sokol'skii, D. V. - 279, 735
 Solomko, N. I. - 725
 Solovskii, V. D. - 695
 Sorokin, V. V. - 900
 Sosin, S. L. - 833
 Sosnovskii, R. I. - 226, 332
 Sosonkin, I. M. - 291
 Sotnikov, A. I. - 961
 Sotnikova-Yuzhik, V. A. - 229, 681
 Spektor, A. Ts. - 416
 Spitsyn, V. I. - 996, 1055, 1091
 Spitsyn, Vikt. I. - 348, 463, 468, 621, 663, 738, 759, 786, 822
 Sribnaya, V. P. - 164
 Stankevich, I. V. - 768
 Starinin, K. B. - 847
 Stefanovich, N. N. - 625
 Stenina, E. V. - 1103
 Stepanov, V. P. - 288
 Strel'tsov, L. I. - 847

Strongina, A. A. - 590
 Struzhko, V. L. - 576
 Stryukov, V. B. - 284
 Stukan, R. A. - 134, 190, 309
 Stytsenko, V. D. - 232
 Subbotina, T. S. - 449
 Sultankhodzhaeva, M. N. - 910
 Sumin, L. V. - 870
 Surdutovich, L. I. - 659
 Sutugin, A. G. - 1006
 Svechnikov, V. N. - 416
 Syrtsova, L. A. - 45, 180

T

Tager, A. A. - 659
 Tal'roze, V. L. - 269, 440, 547
 Talyzenkov, Yu. A. - 16
 Tamarkin, V. F. - 754
 Tananaev, I. V. - 236
 Tarasevich, Yu. I. - 122, 874
 Tarasova, G. M. - 653
 Terent'eva, S. A. - 63
 Tertykh, V. A. - 1038
 Tetyueva, T. V. - 412
 Timrot, D. L. - 313
 Tkachenko, L. A. - 48
 Topchieva, K. V. - 388
 Toptygin, D. Ya. - 476
 Trailina, E. P. - 1055
 Trapeznikov, A. A. - 1099
 Travkin, V. F. - 433
 Tretinnik, V. Yu. - 164
 Tret'yakov, I. I. - 878
 Trubnikova, A. A. - 500, 527
 Trukhtanov, V. A. - 45
 Tsekhanskaya, Yu. V. - 160
 Tsetlin, B. L. - 1053
 Tsiklis, D. S. - 423
 Tsimmerman, S. S. - 423
 Tsitovskaya, I. L. - 112
 Tsukerblat, B. S. - 426, 1107
 Turkova, N. N. - 578
 Turta, K. I. - 134, 190
 Tyabin, M. B. - 419
 Tyan, L. S. - 466
 Tsyachnaya, G. Ya. - 392
 Tyutchenkova, L. D. - 684

U

Umanskii, S. Ya. - 13
 Ur'ev, N. B. - 756
 Ushakova, I. M. - 930
 Usmanov, Z. I. - 472

V

Vainshtein, É. F. - 512
 Valendo, A. Ya. - 1077

Vannikov, A. V. - 783
 Varnin, V. P. - 1059
 Vassenin, R. M. - 316
 Vasil'ev, A. A. - 365
 Vasil'eva, L. M. - 922
 Vasil'eva, V. P. - 698
 Vasserman, A. M. - 38, 128, 1083
 Vatolin, N. A. - 988
 Veiler, S. Ya. - 1002
 Velenskii, A. I. - 625
 Ven'yaminov, S. A. - 55
 Viktorina, M. M. - 201
 Vinnik, M. I. - 396
 Vinogradov, A. P. - 216
 Vinogradova, O. M. - 112
 Vishnevskaya, G. P. - 32
 Vladykina, T. N. - 625
 Vlasov, A. V. - 1053
 Vol'fkovich, S. I. - 586
 Vol'kenshtein, M. V. - 569, 762
 Volkov, V. P. - 615
 Voloshina, L. B. - 326
 Vorob'ev, Yu. P. - 106, 406
 Voronin, A. I. - 92
 Voronin, G. F. - 1
 Voronin, Yu. V. - 463

Voronkov, N. A. - 822
 Voronovich, A. N. - 469
 Voyutskii, S. S. - 944
 Vukovich, Zh. - 732
 Vulikh, A. I. - 385
 Vykhodets, V. B. - 299

Y

Yablokov, Yu. V. - 601
 Yakhnin, E. D. - 566, 717
 Yakovleva, T. I. - 279
 Yalamov, Yu. I. - 972
 Yampol'skii, Yu. P. - 843
 Yanovskii, M. I. - 239
 Yatsimirskii, A. K. - 590
 Yatsimirskii, K. B. - 295
 Yudovich, E. E. - 109
 Yushchenko, V. S. - 618
 Yushina, V. V. - 1072
 Yusupova, V. A. - 1103

Z

Zabotina, A. P. - 279
 Zaikov, G. E. - 396

Zaitseva, N. I. - 476
 Zakatova, N. V. - 926
 Zakharov, I. V. - 156, 707, 774
 Zakharova, F. A. - 996
 Zakharova, M. I. - 1020
 Zamaraev, K. I. - 605, 640, 882, 1068
 Zaripov, M. R. - 4
 Zelentsov, V. I. - 125
 Zelentsov, V. V. - 134
 Zenin, A. A. - 400
 Zharov, A. A. - 1051
 Zhdanov, R. I. - 96
 Zhdanov, S. P. - 198, 914
 Zhdanov, Yu. A. - 707
 Zheligovskaya, N. N. - 663
 Zhigalova, K. A. - 186
 Zhurko, F. V. - 385, 863
 Zhyn', G. G. - 1046
 Zimakov, I. E. - 621
 Zimoglyad, B. N. - 1046
 Zitserman, V. Yu. - 581
 Znamenskii, B. V. - 201
 Zolotarev, P. P. - 701, 975
 Zolotovitskii, Ya. M. - 688
 Zubov, P. I. - 220

TABLES OF CONTENTS

DOKLADY PHYSICAL CHEMISTRY

Volumes 196-201, 1971

(A translation of the Physical Chemistry section of Doklady Akademii Nauk SSSR)

Volume 196, Numbers 1-3

January, 1971

Engl./Russ.

Calculation of the Thermodynamic Properties of Alloys from Diagrams of State —G. F. Voronin	1	133
Influence of the Nature of Intramolecular Rotational Motion on the Magnetic Relaxation Rate of Protons in Solids—M. R. Zaripov, M. M. Bil'danov, G. M. Kadievskii, and G. R. Enikeeva	4	136
Local Impurity Conductivity of Proteins—I. D. Ivanov and V. K. Nekrasova	7	139
Some Electron-Transfer Reactions and Polymerizations Involving Alkaline-Earth Metals —L. N. Moskalenko and A. A. Arest-Yakubovich	10	142
Effect of Electron-Vibrational Interaction on the Vibrational Relaxation of O ₂ and N ₂ during Collision with O Atoms—E. E. Nikitin and S. Ya. Umanskii	13	145
Determination of n-Paraffinic Hydrocarbons in the Presence of Boric Oxide —F. I. Novak, A. N. Bashkurov, V. V. Kamzolkin, and Yu. A. Talyzenkov	16	149
The Combustion Mechanism of Systems with Bound Nitrogen—A. I. Rozlovskii	19	152
Neutron-Diffraction Study of Magnetic and Crystallographic Phase Transitions in Manganese Arsenide with a Change of Pressure and Temperature—N. N. Sirota and G. A. Govor	22	155
Interaction of Cyclic and Cyclolinear Polysiloxanes with Finely Divided Metals in the Formation of Metallopolymers—M. T. Bryk and É. M. Natanson	26	371
Cis-, Trans-Isomerization of Octahedral Complex Compounds of Niobium and Tantalum Fluorochlorides in Solution—Yu. A. Buslaev, E. G. Il'in, S. V. Bainova, and M. N. Krutkina	29	374
EPR Spectra and Paramagnetic Relaxation of Diethyl Phosphate Complexes and Chlorine Complexes of Iron in Diethyl Hydrogen Phosphate—G. P. Vishnevskaya, A. F. Karimova, B. M. Kozyrev, and A. A. Muratova	32	377
Energetic Nonuniformity of Glycosidic Bonds and the Kinetics of Acid Degradation of of Cellulose—V. I. Ivanov, V. A. Afanas'ev, and R. I. Sarybaeva	35	380
Investigation of the Structure of Butadiene-Styrene Block and Statistical Copolymers by the Paramagnetic Probe Method—A. G. Kovarskii, S. G. Burkova, A. M. Vasserman, and Yu. L. Morozov	38	383
Collagen Adsorption Layers. Effect of the Ordered Structures of Biopolymers in Solution on the Formation of Adsorption Layers—R. A. Kul'man	41	386
Investigation of the Electronic State of Iron Ions in a Model Iron-Sulfur Protein by the Nuclear γ-Resonance Method—G. V. Novikov, E. N. Frolov, L. Cher, G. I. Likhtenshtein, L. A. Syrtsova, V. A. Trukhtanov, and V. I. Gol'danskii	45	390
Effect of an Electric Field upon Heterophase Cationic Polymerization of Trioxane —A. T. Ponomarenko, L. A. Tkachenko, and N. S. Enikolopyan	48	393
Inhibition Mechanism of the Ignition of Hydrogen-Oxygen Mixtures by Ethane —V. V. Azatyan	51	617
Energy of the Bond of Oxygen to the Surface of an Iron-Antimony Oxide Catalyst —G. K. Boreskov, S. A. Ven'yaminov, and Yu. D. Pankrat'ev	55	621

Influence of Temperature on the Parameters of the EPR Spectrum of Vanadyl Acetylacetonate—L. A. Bylinskaya, B. M. Kozyrev, and I. V. Ovchinnikov	58	625
Separation of Overlapping Electron Paramagnetic Resonance Spectra by the Method of Differential Saturation—O. Ya. Grinberg, A. A. Dubinskii, and Ya. S. Lebedev	60	627
Determination of the Dipole Moment of the P—N Bond—É. A. Ishmaeva, M. A. Pudovnik, S. A. Terent'eva, and A. N. Pudovnik	63	630
Effect of the Aging Time and Temperature on the Globule Diameter in Aluminum Silicate Hydrogels—S. I. Kontorovich, K. A. Lavrova, G. M. Plavnik, E. D. Shchukin, and P. A. Rebinder	66	633
Electron Paramagnetic Resonance in Graphitic and Nongraphitic Carbonaceous Materials—A. S. Kotosonov	70	637
Effect of Impurities on the Accumulation and Decomposition of Hydroxyl Radicals in Crystalline Ice Irradiated by γ Rays at 77°K—S. A. Puntezhis, B. G. Ershov, and A. K. Pikaev	74	641
Relation between the Limiting Solubility of Hydrogen in Metals and Their Position in the Periodic Table—T. V. Simonishvili	78	645

Volume 196, Numbers 4-6

February, 1971

Concentration Dependence of the Electrical Conductivity of Ion-Exchange Resins—A. T. Alymova, V. P. Meleshko, and A. Ya. Shatalov	81	840
Investigation of the Equilibrium and Ligand Exchange for Cu(II) Acetylacetonate by EPR and Chemical Exchange—V. F. Anufrienko and A. A. Shklyayev	85	844
Stability of Concentrated Lyophobic Sols and Their Coagulation by Electrolytes—B. V. Barboi, Yu. M. Glazman, and I. M. Dykman	89	848
Mechanism of the Singlet-Triplet Transition in Methylene—A. I. Voronin, E. E. Nikitin, and A. A. Shteinman	92	852
Reaction of Inimoxyl Radicals with Antimony Pentachloride—R. I. Zhdanov, V. A. Golubev, V. M. Gida, and É. G. Rozantsev	96	856
Compositional Distribution and Conditions for Gel Formation in Multifunctional Polycondensation—S. E. Konshtein and L. M. Pis'men	98	858
Ion Exchange Extraction and Sorption Processes—B. N. Laskorin and G. N. Shvirin	102	862
Determination of the Primary Concentration of Defects in Ionic Crystals from the Property—Partial Gas Pressure Dependence—A. N. Men', Yu. P. Vorob'ev, V. M. Kamyshev, and G. I. Chufarov	106	866
Study of Intermolecular Reactions in Aqueous Solutions by Electron-Absorption Spectroscopy—B. P. Nikol'skii, V. V. Pal'chevskii, and E. E. Yudovich	109	869
Catalytic Properties of Zeolites Containing Transition Metal Ions in Oxidation-Reduction Reactions—S. Z. Roginskii, O. V. Al'tshuler, O. M. Vinogradova, V. A. Seleznev, and I. L. Tsitovskaya	112	872
Mechanism of Spark Ignition of Aerosols—G. I. Smelkov, B. G. Popov, and N. V. Lavrov	115	876
Multiple-Path Kinetics on Nonuniform Surfaces—Yu. S. Snagovskii and A. K. Avesitov	118	878
Thermochemical Investigation of the Adsorption of Water by Montmorillonite—Yu. I. Tarasevich, O. A. Orazmuradov, and F. D. Ovcharenko	122	882
Hydrothermal Modification of the Texture of Aluminum Hydroxide—V. M. Chertov, V. I. Zelentsov, and I. E. Neimark	125	885
Investigation of Molecular Motion at the Critical Solubility Point of a Binary Liquid by a Paramagnetic Probe Method—A. Yu. Shaulov, A. M. Vasserman, A. M. Brodskii, and N. S. Enikolopyan	128	888
Characteristics of the Dehydration of Monosubstituted Alkaline-Earth Orthophosphates as Illustrated by $\text{Sr}(\text{H}_2\text{PO}_4)_2 \cdot \text{H}_2\text{O}$ —L. N. Shchegrov	131	891

Study of the Spin Isomer of Iron(III) Complexes with Thiosemicarbazones of Oxybenzaldehydes by the Method of Gamma-Resonance Spectroscopy—A. B. Ablov, V. I. Gol'danskii, K. I. Turta, R. A. Stukan, V. V. Zelentsov, E. V. Ivanov, and N. V. Górbéleu	134	1101
Properties of Films of Polydimethylsiloxane on the Surface of Water—V. V. Arslanov and V. A. Ogarev	138	1105
Block Copolymerization of Isoprene with the Decomposition Products of Dinitrosodiacetylbenzidine—A. A. Berlin, B. G. Gerasimov, and L. I. Sakharova	141	1108
Thermodynamic Bases of the Regulation of the Structures of Polymers during their Formation—A. I. Berlin and N. S. Enikolopyan	144	1111
Investigation of the Birefringence of Oriented Polymers—I. E. Goncharova and P. V. Kozlov	147	1114
Photolysis of Frozen Solutions of Hydrogen Peroxide in Isopropyl Alcohol at 77°K—V. S. Gurman and V. I. Papisova	149	1117
Kinetic Relationships and Mechanisms of the High-Temperature Oxidation of Polyethylene—V. V. Edemskaya, B. V. Miller, and Yu. A. Shlyapnikov	152	1121
Mechanism of the Initiating Action of Organic Bromides in the Oxidation of Methylbenzenes Catalyzed by Cobalt Salts—I. V. Zakharov and V. M. Muratov	156	1125
Rate of Solution of Naphthalene in Carbon Dioxide near the Critical Point—I. R. Krichevskii, Yu. V. Tsekhanskaya, and I. I. Sokolinskaya	160	1129
Physicochemical Mechanics of Organic Dispersions of Hydrated Silica—N. N. Kruglitskii, A. S. Makarov, V. P. Sribnaya, and V. Yu. Tretinnik	164	1133
Possibility of Calculating the Tensor of the Molecular Polarizability and the Magnetic Susceptibility from the Bonds—Kuak Dang Cheu	168	1137
Differential Heats of Hydrogen Adsorption on the Surface of Nickelous Oxide and Kinetics of the Process—V. E. Ostrovskii	172	1141
Use of Experimental Planning to Study Superconductor Systems—E. M. Savitskii, V. V. Baron, Yu. V. Efimov, M. M. Bychkova, and N. D. Kozlova	176	1145
Structure of Polynuclear Non-Heme Centers of Iron-Containing Proteins—E. N. Frolov, G. I. Likhtenshtein, and L. A. Syrtsova	180	1149
Range in Which the Atomization Energies of Simple Molecules Are Approximately Additive—O. P. Charkin	183	1153
Mechanism of the Corrosion of Metals in a Two-Phase Electrolyte—Hydrocarbon System—I. L. Rozenfel'd, K. A. Zhigalova, and V. N. Sadakova	186	1379
Gamma-Resonance Spectra of Coordination Compounds of Iron with Thio- and Selenosemicarbazones—K. I. Turta, A. V. Ablov, V. I. Gol'danskii, N. V. Górbéleu, and R. A. Stukan	190	1383
Free Surface Energy of a Platinum Electrode as Function of Potential and Solution Composition—A. N. Frumkin and O. A. Petrii	194	1387
Isosteric Heats of Adsorption of CO ₂ and NH ₃ on Type L Synthetic Zeolites—S. S. Khvoshchev, S. P. Zhdanov, and M. A. Shubaeva	198	1391

Volume 197, Numbers 1-3

March, 1971

The Paramagnetism of Modified Water (Water II)—M. M. Viktorina, B. V. Deryagin, I. G. Ershova, B. V. Znamenskii, and N. V. Churaev	201	114
Stretching and Bending of Hydrogen Bonds as a Function of Their Energy—A. V. Iogansen and M. Sh. Rozenberg	204	117
Monatomic Condensation Nuclei (Showing Up of Single Atoms of ²¹¹ Pb)—Ya. I. Kogan	208	121
The Combustion of Nitrite Esters—B. N. Kondrikov and T. T. Sidorova	212	125
Photosensitized Oxidation of Water and Lower Alcohols by Chlorophyll and Derivatives—V. A. Kuz'min, A. K. Chibisov, and A. P. Vinogradov	216	129

Influence of Chemisorbed Layers of Monomers on the Oxidation Kinetics of Aluminum - R. S. Maslovskaya, T. N. Pavlinova, Yu. N. Mikhailovskii, and P. I. Zubov	220	133
The Possible Role of the Tunnel Effect in Post-Radiation Reactions in Solid Organic Materials - A. I. Mikhailov	223	136
The Mechanism of the Spontaneous Decomposition of Solutions of Hypochlorite and Hypochlorous Acid - B. P. Nikol'skii, V. G. Krunchak, V. V. Pal'chevskii, and R. I. Sosnovskii	226	140
Mechanism of the Formation and Forms of Growth for the Dehydration of Sodium Triphosphate Hexahydrate - V. A. Sotnikova-Yuzhik, E. A. Prodan, and M. M. Pavlyuchenko	229	143
Investigation of the Mechanism of the Topochemical Hydrogenation of Iron Carbide by a Kinetic Method - V. D. Stytsenko, A. Ya. Rozovskii, and A. N. Bashkirov	232	146
Effect of Temperature on the Spectrum of Co^{2+} Ions in Alkali Borate Melts - I. V. Tananaev, B. F. Dzhurinskii, and Kh. M. Bakhimbekova	236	150
Possibility of Chromatographic Determination of Adsorption and Desorption Rate Constants during a Catalytic Process - A. D. Berman and M. I. Yanovskii	239	369
Relationship of the Kinetic Parameters of a Catalytic Reaction and Its Stages - G. K. Boreskov, V. V. Popovskii, and É. A. Mamedov	243	373
Crystallization Mechanism of Amorphous Zirconium Hydroxide - V. B. Glushkova and L. G. Shcherbakova	247	377
A Combination of Two Mechanisms for the Interaction between Positronium and Paramagnetic Quenches in Solution - V. I. Gol'danskii, B. G. Egiazarov, V. P. Ivanov, B. V. Sobolev, and V. P. Shantarovich	251	381
The Use of the Dilution Method in Thermography to Investigate the Kinetics of Chemical Reactions in the Condensed Phase - E. P. Goncharov, G. I. Driatskaya, A. G. Merzhanov, and A. S. Shteinberg	254	385
Investigation of Thermodynamic Properties of Gadolinium Antimonide by an Electromotive Force Method - V. I. Goryacheva, A. V. Nikol'skaya, and Ya. I. Gerasimov	258	389
Interaction of Atoms of Noble Cases with Molecules of CO_2 - A. P. Kalinin and V. B. Leonas	262	393
Kinetics of the Proton Exchange between Trimethylsulfoxonium Nitrate and Water - A. F. Rekasheva, L. A. Kiprianova, and I. P. Samchenko	265	396
Luminescence Resulting from the Interaction of Hydrogen Atoms with the Surfaces of Solid Aromatic Substances - V. D. Shatrov, E. B. Gordon, A. N. Ponomarev, and V. L. Tal'roze	269	400
Energy Transfer from Higher Triplet Levels as the Reason for Photodestruction of Polymers - I. G. Batekha, Yu. B. Shekk, S. A. Krysanov, and M. V. Alfimov	272	614
Enthalpies of Polymerization of Trioxane and Tetraoxane - K. A. Bogdanova, A. K. Bonetskaya, Al. Al. Berlin, G. V. Rakova, and N. S. Enikopolyan	276	618
Examination of a Rhodium-Platinum Catalyst by Electrochemical Methods - A. P. Zabolina, T. I. Yakovleva, and D. V. Sokol'skii	279	621
Rate Constants of Several Reactions of Vibrationally Excited Hydrogen Molecules in the Reaction of Fluorine with Hydrogen - G. A. Kapralova, E. M. Margolina, and A. M. Chaikin	281	624
Slow Rotational Diffusion of the Iminoxy Radical in Viscous Media and Polymers - A. V. Lazarev and V. B. Stryukov	284	627
Interfacial Tension of Liquid Lead in Molten Alkali-Metal Chlorides - M. V. Smirnov, V. P. Stepanov, and A. F. Sharov	288	631
Mechanism of σ -Complex Formation in the Yanovskii Reaction - I. M. Sosonkin, A. Ya. Kaminskii, S. S. Gitis, and E. G. Kaminskaya	291	635
Application of the Method of Graphs to the Kinetics and Mechanisms of Multistage Complexing Reactions - K. B. Yatsimirskii and L. I. Budarin	295	639

Volume 197, Numbers 4-6 April, 1971

Calculation of the Thermodynamic Functions of Dilute Solutions of Light Impurities in Face-Centered Crystals—V. B. Vychodets, V. B. Demin, P. V. Gel'd, A. N. Men', A. Ya. Fishman, and G. I. Chufarov	299	859
Estimate of the Dipole Moment of the P—S Bond—É. A. Ishmaeva, O. A. Raevskii, R. A. Cherkasov, F. G. Khalitov, V. V. Ovchinnikov, and A. N. Pudovik	302	862
Kinetics of the Oxidation-Polymerization Reaction of Phenyl Acetylene with Oxygen—T. D. Nekipelova, A. B. Gagarina, and N. M. Émanuel'	305	865
Gamma-Resonance Spectroscopic Study of the Polymerization of Formaldehyde in the Presence of Additives of the Donor Type—I. F. Sanaya, V. Ya. Rochev, N. F. Kedrina, R. A. Stukan, V. I. Gol'danskii, and N. S. Enikolopyan	309	869
Calculation of the Equilibrium Constant and Enthalpy of a Dissociation Reaction from the Viscosity of the Dissociating Gas—D. L. Timrot and M. A. Serednitskaya	313	873
Anisotropic Solvent Diffusion in Oriented Polymers—É. G. Shapkhayev, A. E. Chalykh and R. M. Vasenin	316	876
Influence of Highly Dispersed Aluminum and Silicon Oxides on the Stability of Structures in Aqueous Dispersions of Bentonites—G. K. Shishkovskii, P. A. Rebinder, and N. N. Serb-Serbina	320	880
Photocurrents, Photographic Sensitivity, and Exciton Absorption of Light in Silver Halides—B. U. Barshchevskii	323	1100
Change in the Vibrational Absorption Spectrum of Molecules of Water Dissolved in Organic Solvents after Passage through a Magnetic Field—V. I. Klassen, M. A. Orel, M. A. Sarukhanov, I. V. Kagarlitskaya, S. Sh. Rozenfel'd, I. V. Lapatukhin, and L. B. Voloshina	326	1104
Work of Adsorption and the Hydrophilic-Lipophilic Balance in Molecules of Surface-Active Agents—P. M. Kruglyakov and A. F. Koretskii	328	1106
Catalytic Decomposition of Hypochlorite and Hypochlorous Acid by Metallic Iridium—B. P. Nikol'skii, V. G. Krunchak, V. V. Pal'chevskii, and R. I. Sosnovskii	332	1110
Mechanism of Electrolytic Dissociation in the Stannic Chloride—Acetic Acid System—Yu. Ya. Fialkov, Yu. A. Karapetyan, and V. P. Basov	335	1113
Reasons for Hysteresis during Wetting of Solid Oxides with a Fused Metal—V. V. Khlynov, O. A. Esin, and A. B. Kut'in	338	1116
Theory of Chemical Reactions in the Field of a Periodic Source—A. A. Chernenko and A. M. Brodskii	340	1118
Study of the Electron-Acceptor Properties of Organic Compounds Using the Positron Method—V. P. Shantarovich, V. I. Gol'danskii, P. S. Shantarovich, and O. V. Koldaeva	344	1122
Mechanism of Impurity Paramagnetic Center Formation in γ -Irradiated Ionic Salts—L. I. Barsova, B. G. Ershov, G. Yu. Popova, and Vikt. I. Spitsyn	348	1355
Dependence of the Rate Constant of Growth of Macroradicals of Polymethylmethacrylate (PMMA) on the Chain Length and Its Manifestation in the Kinetics and Molecular Weight Distribution (MWD)—I. M. Bel'govskii, G. N. Kornienko, and N. S. Enikolopyan	351	1358
Effect of Substituents on the Degree of Covalence of the Metal-Ligand Bond in Complexes of Substituted Anilines with Nickel Acetylacetonate—E. I. Berus, Yu. G. Gladkin, V. A. Barkhash, and Yu. N. Molin	355	1362
Mobility and Concentration of the Current Carriers in Polymers with Conjugate Bonds—A. F. Lunin, V. G. Chernykh, S. S. Oganessov, S. G. Moiseev, V. G. Kostrovskii, and Ya. M. Paushkin	359	1366
Carbonization of Graphitizing and Nongraphitizing Materials—V. S. Ostrovskii, V. A. Lapina, and I. V. Kamenskii	362	1369
Effective Electric Conductivity of a Porous Gas—Liquid Electrode. Model of Packed Spheres—Yu. A. Popov, Yu. V. Alekseev, and A. A. Vasil'ev	365	1372

Decrease in the Strength of Polycrystalline Naphthalene in the Adsorption of Surface-Active Substances from Aqueous Solutions—E. A. Sinevich, N. V. Pertsov, and E. D. Shchukin	369	1376
Two-Quantum Sensitized Photoionization—Z. A. Sinitsyna and Kh. S. Bagdasar'yan	373	1380

Volume 198, Numbers 1-3 May, 1971

On the Theory of Simple Substitution Reactions in the Liquid Phase—R. R. Dogonadze and A. M. Kuznetsov	377	130
Competition in Charge Capture by Additives in γ -Irradiated Polyvinyl Chloride—B. V. Kotov and A. N. Pravednikov	381	134
Ion Exchange Equilibrium between Ionite Granules—A. V. Nikolaev, V. L. Bogatyrev, F. V. Zhurko, A. I. Vulikh, S. I. Sokolova, and N. Ya. Lyubman	385	138
Role of the Cations in the Catalytic Activity of Type Y Zeolites of Different Composition—K. V. Topchieva and Ho Shih Thoang	388	141
Electric-Double-Layer Structure at the Platinized-Platinum Electrode in the Presence of Chemisorbed Methanol—A. N. Frumkin, V. E. Kazarinov, and G. Ya. Tsyachnaya ...	392	145
Mechanism of the Acid-Catalytic Hydrolysis of Compounds with Semiactal Bonds—N. A. Khalturinskii, Yu. V. Moiseev, M. I. Vinnik, and G. E. Zaikov	396	149
Site of Catalyst Activity during Combustion of a Condensed Substance—A. A. Zenin, O. I. Leipunskii, and V. M. Puchkov	400	361
Hindered Interaction of the Electron Pair of Group V Elements. VIII. Mass Spectra of Stable Iminoxy Radicals—R. G. Kostyanovskii and Kh. Khafizov	402	363
Calculation of the Configuration Entropy in a Cluster Model—A. N. Men', Yu. N. Kurushin, Yu. P. Vorob'ev, and V. N. Kiselev	406	367
Determination of the State of Water in Sulfocationites by NMR—N. I. Nikolaev, G. A. Grigor'eva, N. N. Shapet'ko, and V. A. Arkhipov	408	369
Effects of Thermocycling of Single Crystals of Tungsten and Molybdenum Alloys—E. M. Savitskii, G. S. Burkhanov, T. V. Tetyueva, and V. A. Kuz'mishchev	412	373
Effect of Yttrium on the Phase Composition of Vanadium-Gallium Alloys—V. N. Svechnikov, V. M. Pan, and A. Ts. Spektor	416	377
Mechanism of Deutero-Hydrogen Exchange of Saturated Hydrocarbons with Protons of the Solvent, Catalyzed by Platinum Complexes—M. B. Tyabin, A. E. Shilov, and A. A. Shteinman	419	380
Molar Volumes and Thermodynamic Properties of Methane at High Pressures and Temperatures—D. S. Tsiklis, L. R. Linshits, and S. S. Tsimmerman	423	384
Magnetic Moments of Trimeric Clusters with Nonequivalent Metal Ions—B. S. Tsukerblat, M. I. Belinskii, and A. V. Ablov	426	387
Investigation of Several Sections of the Pseudo-Ternary $Nb_3Al-Nb_3Ga-Nb_3Ge$ System—N. V. Ageev, N. E. Alexeevskii, and V. F. Shamrai	430	611
Investigation of the Interaction of Hexahalide Rhenates (IV) with Tri-n-butylphosphine Oxide in Extraction Processes—K. A. Bol'shakov, N. M. Sinitsyn, V. F. Travkin, and L. N. Antimonova	433	614
Nature and Properties of Active Centers Formed during Mechanical Destruction of Some Solid Bodies—V. Yu. Borovkov and P. Yu. Butyagin	437	618
Mass Spectrometric Determination of the Rate Constant for the Elementary Reaction of Fluorine Atoms with Hydrogen—A. F. Dodonov, G. K. Lavrovskaya, I. I. Morozov, and V. L. Tal'roze	440	622
Chain Interaction in Concentrated Polymer Solutions—V. I. Irzhak, L. I. Kuzub, and N. S. Enikolopyan	443	626
Kinetics of the Dehydration of Diacetone Alcohol over Carbene—A. S. Kazanskaya, N. V. Ryabtseva, I. S. Panidi, and Ya. M. Paushkin, A. M. Sladkov, and Yu. P. Kudryavtsev	446	629

Cluster Model of Defect Solid Solutions with Nonequivalent Lattice Points—V. M. Kamyshev, A. G. Gorbakov, A. N. Men', Yu. A. Nechaev, T. S. Subbotina, and P. V. Gel'd	449	631
Mechanism of the Reaction of Fluorine with Hydrogen—G. A. Kapralova, E. M. Margolina, and A. M. Chaikin	452	634
Dilatometric Investigation of a NaA Zeolite with the Absorption of Water Vapor —V. F. Kononyuk, A. I. Sarakhov, and M. M. Dubinin	456	638
Change in the Adsorption Capacity of the Surface of Metal Oxides during Their Oxidation- Reduction Conversions—R. E. Mardaleishvili, A. P. Daneliya, and M. Ya. Kon'	459	641
An Investigation of the Processes Accompanying the Dehydration of Radioactive Crystalline Magnesium and Sodium Sulfate Hydrates—Vikt. I. Spitsyn, I. E. Mikhailenko, and Yu. V. Voronin	463	645
Formation of the Mesophase and EPR Spectrum in the Low-Temperature Carbonization of Graphitizing Substances—A. S. Fialkov, L. S. Tyan, V. Samoilov, and B. N. Smirnov	466	649

Volume 198, Numbers 4-6

June, 1971

Temperature Relationship of the Proton Relaxation Rate in Some 1-1 Electrolyte Solutions—A. N. Voronovich, L. S. Lilich, S. V. Petukhov, and M. K. Khripun	469	865
Investigation of Some Complexes of Cr(V) with Oxygenated Environments by the EPR Method—S. Garif'yanov, A. V. Il'yasov, B. M. Kozyrev, and Z. I. Usmanov	472	868
Kinetics of Some Reactions for Polymerization and Polymer Destruction Studied by the Precipitation Temperature Method—V. M. Gol'dberg, I. M. Bel'govskii, G. N. Kornienko, I. A. Krasotkina, N. I. Zaitseva, and D. Ya. Toptygin	476	872
Adsorption from Four-Component Solutions—N. N. Gryazev, M. N. Rakhlevskaya, and G. A. Rumyantseva	480	876
Determination of the Rate Constants for the Cationic Polymerization of Styrene by Pulse Electrodialysis—F. S. D'yachkovskii and M. L. Eritsyan	483	880
Radiation Ionic Graft Copolymerization—V. Ya. Kabanov, L. P. Sidorova, and Vikt. I. Spitsyn	486	883
Structure of the π -Electron Spectra of Infinite Phenylpolyene Molecules—I. D. Mikhailov and A. P. Kolesnikov	488	885
Isotopic Exchange of Hydrogen in Ethyl and Benzyl Derivatives of $C_3H_5Mn(CO)_3$ and $C_3H_5Mn(CO)_2PPh_3$ —M. N. Nefedova, V. N. Setkina, A. I. Khatami, A. G. Ginzburg, and D. N. Kursanov	492	889
Structure and Magnetic Properties of Mixtures of Ferrites and Magnesium Gallates —B. I. Pokrovskii, A. K. Gapeev, A. V. Ped'ko, L. N. Komissarova, and A. N. Goryaga ..	495	892
Mechanism of Cationic Polymerization of Conidine—E. F. Razvodovskii, A. V. Nekrasov, A. I. Al. Berlin, A. T. Ponomarenko, and N. S. Enikolopyan	497	894
Photochemical Properties of Silver Chloride, Bromide, and Iodide—K. V. Chibisov and A. A. Trubnikova	500	898
Kinetics of Polymer Flow on Solid Surfaces—V. V. Arslanov, T. I. Ivanova, and V. A. Ogarev	502	1113
Interaction of Excited Atoms of the Alkali Metals with Atoms of the Noble Gases —A. A. Belyaeva, R. B. Dushin, E. V. Nikiforov, Yu. B. Predtechenskii, and L. D. Shcherba	506	1117
Possibility of Applying Difference Interpolation to Calculation of the Physicochemical Properties of Molecules—Yu. K. Knobel' and Yu. A. Lebedev	509	1121
Structure of Polyethyleneglycol Complexes of Diethylaluminum Chloride—A. A. Popov, É. F. Vainshtein, and S. G. Éntelis	512	1124
Conformation of Polymeric Macromolecules in the Crystalline State and in an Ideal Solvent —V. P. Privalko and Yu. S. Lipatov	515	1127

Role of the $R_1 + R_2H$ Chain-Transfer Reaction in the Degenerated-Branched Chain Cooxidation of Hydrocarbons—V. S. Rafikova, Z. K. Maizus, I. P. Skibida, and N. M. Émanuél'	519	1131
Integral Chemiluminescence of Flames—A. I. Rozlovskii, V. G. Khasanov, and R. Kh. Gimatdinov	523	1135
Stability of Latent-Image Centers with a Change in the Anion Sublattice—A. A. Trubnikova and K. V. Chibisov	527	1139
Dislocation Mechanism of Electrocrystallization of Filamentary Crystals of Silver—D. V. Fedoseev and N. D. Polyanskaya	530	1143
Influence of Pressure on the Parameters of the EPR Spectra of Copper Diethyldithiocarbamate in Liquid Solutions—A. I. Filippov, L. A. Bylinskaya, B. M. Kozyrev, and I. V. Ovchinnikov	533	1146
Investigation of Molecular Motion in Organic Crystals by the Paramagnetic Probe Method—A. I. Bol'shakov, A. I. Mikhailov, and V. I. Gol'danskii	536	1356
Effect of Electron Excitation on Phase Changes and Phase Equilibria—E. A. Galashin	540	1360
Mechanism of the Formation of Deep Latent Images in Emulsion Microcrystals—E. V. Kal'manson and K. B. Chibisov	544	1364
Mass Spectrometric Measurement of the Rate Constants for the Reactions of Hydrogen and Fluorine Atoms with Methyl Iodide and Trifluoriodomethane—I. O. Leipunskii, I. I. Morozov, and V. L. Tai'roze	547	1367
$H_2SO_4-H_2O$ Equilibrium in Concentrated Sulfuric Acid Solutions—N. B. Librovich and V. D. Maiorov	551	1371
Reactive Capacity of the Solvated Electron in Irradiated Methyl Alcohol—A. K. Pikaev, G. K. Sibirskaya, and S. A. Kabakchi	554	1374
Critical Character of the Inhibiting Activity of Copper Bis-(3-oxy-2-iminomethylbenzo(b)-thiophenate) in Oxidation of Hydrocarbons—L. A. Smurova, T. V. Sirota, A. B. Gagarina, V. P. Litvinov, É. G. Ostapenko, Ya. L. Gol'dfarb, and N. M. Émanuél'	558	1378
Effect of Grinding Calcite on the Equilibrium and Heat of Its Thermal Dissociation—G. S. Khodakov	562	1382
Investigation of the Contact Reaction between Solid Particles with Polymer Molecules Adsorbed on the Surfaces—E. D. Yakhnin and É. I. Averbakh	566	1386

Volume 199, Numbers 1-3 July, 1971

Quasiclassical Calculation of the Probability for Electron Transfer Via a Virtual Intermediate State of a Bridging Group—M. V. Vol'kenshtein, R. R. Dogonadze, A. K. Madumarov, and Yu. I. Kharkats	569	124
Mechanism of Formation of the Latent Photographic Image—E. A. Galashin and M. V. Fok	573	128
Catalytic Properties of Aluminozeolite Catalysts Containing Alkali Metal Cations—P. N. Galich, Yu. N. Sidorenko, M. A. Piontkovskaya, V. L. Struzhko, and I. E. Neimark	576	132
Increase in the Strength of Metal-Filled Conducting Polymer Films under the Influence of a Static Magnetic Field—V. E. Gul', N. N. Turkova, and M. G. Golubeva	578	135
Macroscopic Equations for Heisenberg Exchange in Dilute Solutions—V. Yu. Ziserman	581	138
Electronic Levels of the Ferrocene Molecule in the Collective Motions Model—L. V. Iogansen	584	142
Investigation of the Kinetics of Melt Reduction of Lao Kai Apatite—Le Suan Ngok, S. I. Vol'fkovich, and R. G. Aziev	586	144
Kinetic Model of Cyanogen Chloride Trimerization on Active Carbon—N. K. Malinin, M. G. Slin'ko, Yu. Sh. Matros, and V. G. Gorskii	588	146

Comparative Investigation of the Role of Hydrophobic Interaction between the Side Group of the Substrate and the Active Surface in Reactions in Which an Enzyme (α -Chymotrypsin), a Synthetic Polymer Catalyst, and a Nucleophile, Sorbed by a Micelle, Participate—K. Martinek, Yu. É. Kirsh, A. A. Strongina, V. N. Dorovska, A. K. Yatsimirskii, I. V. Berezin, and V. A. Kabanov	590	148
Theory of the Determination of the Clausing Factor—P. I. Ozhegov, A. V. Merzlyakov, and L. L. Kunin	594	152
Formation of Thin Stable Liquid Films on Fibers during Filtration of Fogs—B. F. Sadovskii, G. I. Baberkina, G. A. Chernyaeva, and I. V. Petryanov	596	154
Chemisorption of Interacting Molecules Taking into Account Interaction with Topochemical Impurities—V. K. Fedyanin	598	156
EPR Study of the Symmetry of Mixed Binuclear Cu(II) Carboxylates—Yu. V. Yablokov, V. V. Gavrilov, L. N. Milkova, and A. V. Ablov	601	159
Use of an NMR Method to Obtain Proof of the Formation of Intermediate Complexes in a Hydroperoxide—Catalyst System—G. M. Bulgakova, A. N. Shupik, I. P. Skibida, K. I. Zamaraev, and Z. K. Maizus	605	376
Thermodynamic Investigation of Alloys of the System Lanthanum—Antimony by the EMF Method: Lanthanum Diantimonide and Monoantimonide—V. I. Goryacheva, A. V. Nikol'skaya, and Ya. I. Gerasimov	608	380
Structure of Chelates of Ni(II) with Ortho-Hydroxyazo Compounds—V. A. Kogan, O. A. Osipov, and S. N. Shchebak	612	384
Reactions of Oxygen-Containing Rings with Carbonium Salts—É. F. Oleinik, O. A. Plechova, V. M. Novotortsev, L. V. Kompaniets, V. P. Volkov, E. F. Razvadovskii, and N. S. Enikolopyan	615	388
Effect of Metal Alloying on the Mechanical Properties of Germanium—N. V. Pertsov, V. T. Kruchinin, V. S. Yushchenko, and E. D. Shchukin	618	391
Influence of External Irradiation with Beta Particles of the Surface of a Silver-Indium (5 Atomic %) Alloy on Evaporation—Vikt. I. Spitsyn, I. Ya. Sklyarenko, Yu. A. Priselkov, and I. E. Zimakov	621	394
EPR Study of the Effect of a Glow Discharge on the Surface of Polytetrafluoroethylene—N. N. Stefanovich, V. A. Radtsig, A. I. Velenskii, T. N. Vladykina, and N. A. Krotova	625	398
Luminescence Centers in Inert Gas Crystals Containing Lithium Atoms—A. A. Belyaeva, R. B. Dushin, Yu. B. Predtechenskii, and L. D. Shcherba	629	628
Thermodynamic Investigation into Alloys of the Lanthanum—Antimony System by the Electromotive Force Method. Lanthanum Antimonides— La_4Sb_3 , La_5Sb_3 , La_2Sb —V. I. Goryacheva, A. V. Nikol'skaya, and Ya. I. Gerasimov	632	632
Diamagnetic Shielding of F^{19} Nuclei in Tetrahedral and Octahedral Fluorides of the Nontransition Elements—M. M. Gofman, E. L. Rozenberg, and M. E. Dyatkina ..	635	635
Two-Frequency Measurement of the Zero-Charge Potential—V. V. Elkin, V. N. Alekseev, L. L. Knots, and D. I. Leikis	638	638
Tunnel Effect in Electron-Transfer Reactions in a Condensed Phase—K. I. Zamaraev, R. F. Khairutdinov, A. I. Mikhailov, and V. I. Gol'danskii	640	640
Kinetics of, and Catalysts for, the Condensation of Formaldehyde—O. V. Krylov, Yu. E. Sinyak, An. A. Berlin, and I. L. Shul'gina	643	643
Ionization Processes in the Ammonium Perchlorate Flame—V. S. Logachev, A. S. Dmitriev, and P. F. Pokhil	646	646
Influence of Anion Hydration Energy on the Adsorption and the Inhibitory Action of Additives in Cadmium Electrodeposition—Yu. M. Loshkarev, R. V. Malaya, and L. P. Snetkova ..	649	650
Complexes of Tin Tetrachloride and Their Role in Reactions Involving Rupture of the Acetal Bond—I. S. Morozova, G. M. Tarasova, V. V. Ivanov, E. V. Bryukhova, and N. S. Enikolopyan	653	654

Investigation of the Molecular Mechanism of the Mutagenic Effect of Nitrosoalkylureas. Reaction between Nitrosoalkylureas and Cytidine—A. M. Serebryanyi and R. M. Mnatsakanyan	656	657
Kinetic of the Swelling of Polymers under Pressure—L. I. Surdutovich, A. E. Chalykh, and A. A. Tager	659	661
Acid-Base Properties and Thermodynamic Scale of the Trans Influence in the Chemistry of Complex Compounds of Pt(IV)—M. G. Felin, N. N. Zheligovskaya, and Vikt. I. Spitsyn	663	665

Volume 199, Numbers 4-6

August, 1971

Recognition of the Physiological Activity of Chemical Compounds on a Perceptron with a Random Adaptation of Structure—S. A. Hiller, A. B. Glaz, L. A. Rastrigin, and A. B. Rozenblit	665	851
Spherulite Formation During Isothermal Crystallization of Isotactic Propylene Solutions —A. V. Kenarov, G. K. El'yashevich, V. G. Baranov, and S. Ya. Frenkel'	668	854
Use of an Adiabatic Calorimeter for Determining Termination Constants in the Polymerization of Solid Formaldehyde in a γ -Radiation Field and in Postpolymerization —D. P. Kiryukhin, A. M. Kaplan, I. M. Barkalov, and V. I. Gol'danskii	671	857
Mechanisms of the Absorption of Silver Ions by Activated Charcoals—L. A. Kul'skii, E. S. Matskevich, and L. V. Goroshko	675	861
Possibility of the Existence of the CF_6^{2-} Ion—E. L. Rozenberg and M. E. Dyatkina	678	865
Etch Pits and Dehydration Figures in the Hexahydrate of Sodium Tripolyphosphate —V. A. Sotnikova-Yuzhik, E. A. Prodan, and M. M. Pavlyuchenko	681	869
Oxidative Isomerization of Higher Olefins in the Presence of Complex Compounds of Rhodium—L. D. Tyutchenkova, L. G. Privalova, Z. K. Maizus, N. F. Gol'dshleger, M. L. Khidekel', I. V. Kalechits, and N. M. Émanuél	684	872
Temperature-Jump Method in Electrochemical Investigations—A. A. Chernenko, Ya. M. Zolotovskii, and L. I. Korshunov	688	876
Defects in the Crystal Lattice of Nickel Ferrites—V. I. Arkharov, V. N. Bogoslovskii, R. V. Kotel'va, and V. P. Pashchenko	692	1088
Mechanism of the Oxidation of Carbon Monoxide on Metal Oxides—G. K. Boreskov, V. I. Marshneva, and V. D. Solovskii	695	1091
Thermodynamic Characteristics of Higher Thallium Sulfides and Certain Regularities in a Series of Monochalcogenides of the IIIB Subgroup—V. P. Vasil'ev, A. V. Nikol'skaya, and Ya. I. Gerasimov	698	1094
Steady-State Step in Nonequilibrium Adsorption Dynamics—P. P. Zolotarev and A. I. Kalinichev	701	1098
Calculation of Permutable Factors in the Theoretical Group Classification of Polyelectron Polyatomic Systems—A. N. Men', B. A. Men', D. S. Farberov, and G. I. Chufarov	704	1101
Calculation of the Electron Structure and Dipole Moment of Calycene by the CNDO/2 Method—V. I. Minkin, Yu. A. Zhdanov, B. Ya. Simkin, and I. I. Zakharov	707	1104
Determination of Surface Concentrations in $CaO-Al_2O_3-SiO_2$ Melts—A. A. Ofitserov, L. N. Sokolov, V. V. Baidov, and L. L. Kunin	710	1107
Spin-Spin Coupling Constants of Aziridine Ring Protons. Three-Membered Rings. X. —A. A. Fomichev and R. G. Kostyanovskii	713	1110
Concentration and Temperature Curves for the Contact Interactions of Particles in Polymer Solutions—E. D. Yakhnin, É. I. Averbakh, and O. I. Lyubomirova	717	1114
EPR Investigation of Electron Transfer on the Surface of Activated Carbon—A. D. Grishina	721	1339
Degree of Dispersion of Emulsions as a Factor Affecting the Rate of Initiation of Radical Reactions—S. S. Ivanchev, A. I. Andor, and N. I. Solomko	725	1343
Chemical Shifts of Water in Semipermeable Membranes of Cellulose Acetate —V. V. Mank, D. D. Kucheruk, and F. D. Ovcharenko	729	1347

Disorder and Aging of the Solid Phase during Crystallization of BaSO ₄ —I. V. Melikhov, Zh. Vukovich, and B. D. Nebylitsyn	732	1350
Hydrogenation of Binary Alkyne Mixtures on Rhodium—A. M. Sokol'skaya, V. A. Shoshenkova, S. A. Ryabinina, and D. V. Sokol'skii	735	1353
Effect of Radiation on the Catalytic Activity of Some Rare Earth Element Oxides—Vikt. I. Spitsyn, G. N. Pirogova, and R. I. Korosteleva	738	1356

Volume 200, Numbers 1-3 September, 1971

Thermionic Mass Transfer Through an Electrolyte—V. N. Aksenov and I. G. Belousov	741	140
The Mechanism of Low-Temperature Sintering of Highly Dispersed Platinum Black—N. S. Lidorenko, N. M. Kagan, S. P. Chizhik, R. M. Marinova, Yu. N. Pisarev, and A. B. Ivanova	744	142
Adsorptive Properties of Chemically Nonequivalent Oxygen Atoms (Ions) in V, U, and Mn Oxides—R. E. Mardaleishvili and A. P. Daneliya	747	145
Determination of the Relative Ionization Cross Section of LiScF ₄ by Means of the "Reverse" Isotherm Method—L. N. Sidorov, A. S. Alikhanyan, and V. B. Shol'ts	751	149
Effect of Crystallization on the Mechanical Destruction of Polychloroprene—V. F. Tamarkin, G. V. Chubarova, M. F. Bukhina, and A. S. Kuz'minskii	754	153
Behavior of Finely Dispersed Powders during Vibration (Formation and Breakdown of Aggregates)—N. B. Ur'ev	756	156
Study of the State of the Water of Hydration in Aluminum Ethylenediaminetetraacetate—V. F. Chuvaev, Vikt. I. Spitsyn, L. V. Anan'eva, and N. I. Snezhko	759	160
Effect of Solvents on the Intramolecular Mobility of Macromolecules in Solution—E. V. Anufrieva, M. V. Vol'kenshtein, M. G. Krakovyak, and T. V. Sheveleva	762	358
Diffusion Width of a Large-Angle Grain Boundary—B. S. Bokshtein	765	361
Qualitative Evaluation of the Comparative Heat Stabilities of Some Polyheteroarylenes—D. A. Bochvar, I. V. Stankevich, E. S. Krongauz, and V. V. Korshak	768	364
Retardation of Tetrachloroethylene Oxidation by Benzene—I. V. Dobrov and V. A. Poluéktov ..	771	367
Mechanism of the Synergism of Cobalt and Manganese Salts in the Bromide Initiated Oxidation of Methylbenzenes—I. V. Zakharov and V. M. Muratov	774	371
Radiationless Deactivation in Electron Transfer Photoprocesses—M. G. Kuz'min and L. I. Guseva ..	779	375
Pulsed Radiolysis of Hexamethylphosphotriamide in the Presence of Salts—E. I. Mal'tsev and A. V. Vannikov	783	379
Effect of Alkali or Alkoxide on Yields of Solvated Electrons in the Pulsed Radiolysis of Methanol or Ethanol—A. K. Pikaev, G. K. Sibirskaya, E. M. Shirshov, P. Ya. Glazunov, and Vikt. I. Spitsyn	786	383
Conformational Transitions and the Oxidation-Reduction Potential of Cytochrome P-450—L. M. Raikhman, B. Annaev, and É. G. Rozantsev	790	387
Kinetics of Formation of the >N—CO Bond in Quinolisinidine Derivatives in Acid Media—Sh. I. Salikhov, V. B. Leont'ev, A. I. Ishbaev, Kh. A. Aslanov, and A. S. Sadykov	793	391
Connection between Virial Coefficients and Association Constants—N. A. Smirnova	796	394
The Electrochemical Treatment of Catalytic Hydrogenation of Organic Compounds on Metal Catalysts in Electrolyte Solutions—A. V. Finkel'shtein	800	398
Exciton Nature of the EPR Signal in Complexes of Crystalline Chlorophyll with Electron Acceptors—V. E. Kholmogorov	804	402
Effect of the Medium on the Mobility of Dislocations in Ionic Crystals—E. D. Shchukin, V. I. Savenko, L. A. Kochanova, and P. A. Rebinder	808	406
Latent Image Distribution in Nuclear Emulsions under the Influence of a Pulsed Electrical Field—A. B. Akopova, É. A. Babakhanyan, G. M. Garibyan, N. V. Magradze, and L. V. Melkumyan	812	617
Hydrogen Adsorption and the Surface Tension of Platinum—A. Ya. Gokhshtein	815	620

Genesis of Bismuth Molybdate—M. A. Dalin, N. A. Mangasaryan, B. R. Serebryakov, V. L. Mekhtieva, A. E. Portyanskii, and K. M. Mekhtiev	819	624
Radiochemical Synthesis of Grafted Polymeric Materials with Fungicidal Properties —V. Ya. Kabanov, N. A. Voronkov, D. A. Kochkin, and Vikt. I. Spitsyn	822	628
Nonadiabatic Mechanism for Proton Transfer during Photochemical Hydrogen-Transfer Reactions in Aromatic Compounds—M. G. Kuz'min and Yu. Yu. Kulis	824	630
Role of Ion Pairs and Free Ions in the Polymerization of Methacrylonitrile on Triethylphosphine—F. Ranogaets, M. A. Markevich, E. V. Kochetov, and N. S. Enikolopyan	828	634
Investigation of the Secondary Structure of the Magnesium Salt of DNA—I. Ya. Skuratovskii and M. A. Mokul'skii	831	638
Reactivity of Phenyl-Substituted Silicon Dihydrides—S. L. Sosin, V. P. Alekseeva, and V. V. Korshak	833	641
Kinetics of Formation of Metal Vacuum-Condensate Structures—G. V. Fedorov	836	644
Structure and Relative Stability of Gaseous Compounds of the Rare Earth Elements—O. P. Charkin	839	647
Determination of the Hydrogen Atom Concentration by the Kinetic Method during the Cracking of Ethane—Yu. P. Yampol'skii, Yu. V. Maksimov, S. I. Korochuk, R. A. Kalinenko, and K. P. Lavrovskii	843	651

Volume 200, Numbers 4-6

October, 1971

A Study of SiC Single-Crystal Films Obtained by the Bombardment of Si Single Crystals by C ⁺ Ions—E. K. Baranova, K. D. Demakov, K. B. Starinin, L. I. Strel'tsov, and I. B. Khaibullin	847	869
Calculation of the Electronic Structure of Coordination Compounds of Transition Metals by the LCAO-MO SCF Method in the CNDO Approximation—V. I. Baranovskii and O. V. Sizova	849	871
Complex Formation for the Lithiumalkyls with Diethyl Ether—A. N. Genkin and B. I. Boguslavskaya	852	874
Nonlinear Spontaneous Combustion in the Kinetics of Hydrogen Oxidation—L. A. Lovachev and T. Gontkovskaya	856	878
Electron-Diffraction Investigation of the Molecular Structure of 3-Oxo-3-chloro-1,3- thiaphosphetane—V. A. Naumov and V. N. Semashko	859	882
Mechanism and Kinetics of the Exchange of Ions between Grains of Ion Exchangers —A. V. Nikolaev, V. L. Bogatyrev, and F. V. Zhurko	863	886
Thermodynamics of Polyparaphenylene—I. B. Rabinovich, V. N. Sapozhnikov, V. A. Sergeev, N. V. Karyakin, G. P. Krylova, and V. V. Korshak	867	890
Mechanism and Relative Cross Sections of Certain Ion Molecular Reactions at Low Collision Energies—L. V. Sumin	870	893
Spectral Investigation of the Reaction of Water with Pallgorskite—Yu. I. Tarasevich and F. D. Ovcharenko	874	897
Kinetics and Mechanism of Reduction of NO by Hydrogen on Platinum—I. I. Tret'yakov, V. N. Korchak, and B. R. Shub	878	901
Interaction at Large Distances in Reactions of Thermalized Electrons with Acceptors —R. F. Khairutdinov, A. I. Mikhailov, and K. I. Zamaraev	882	905
Application of Simplex Matrices to the Study of Adsorption from Multicomponent Systems —Yu. P. Adler, N. N. Gryazev, M. N. Rakhlevskaya, and G. A. Rummyantseva	886	1123
Flash Photolysis of Triphenylamine—Photoionization in a CCl ₄ Medium—Kh. S. Bagdasar'yan, V. A. Borovkova, and V. F. Pikel'ni	888	1126
NMR Investigation of the Adducts of Copper Complexes with Pyridine—E. I. Berus, V. F. Anufrienko, Yu. N. Molin, and A. A. Shklyayev	891	1129
Effect of Surface Chemistry of Macroporous Silicas on the Chromatography of Polyhydroxyethylenes—A. V. Kiselev, T. I. Ryabinina, and Yu. A. El'tekov	894	1132

Interaction of Excited Mercury Atoms with Molecules Adsorbed on ZnO—A. M. Panesh and I. A. Myasnikov	897	1136
Ionic Molecular Reactions with the Participation of Thermal Ions during the Photoionization of Molecules Containing Heteroatoms—V. K. Potapov and V. V. Sorokin	900	1140
Autocatalysis and Frontal Reaction in the System Dialkylsulfide—Nitric Acid—Dioxane—E. S. Rudakov, L. N. Arzamaskova, R. I. Rudakova, and V. M. Mastikhin	903	1144
Statistical Theory of Mixtures of Associated Gases—N. A. Smirnova	906	1148
Radiothermoluminescence of 10-M KOH Solutions—M. N. Sultankhodzhaeva and V. A. Sharpatyi	910	1152
Activated Adsorption of Ammonia on Synthetic Sodium Faujasites—S. S. Khvoshchev and S. P. Zhdanov	914	1156
Possible Types of Symmetry with Phase Transitions of the Second Order in Crystals of O_h^3	917	1160
Application of the Thermodynamics of Irreversible Processes to the Theory of Orientational Effects in Disperse Systems in an External Electric Field—V. N. Shilov	918	1161
An EPR Study of the Adsorption of Oxygen on Anthracite Fusain—A. A. Shklyayev, V. F. Anufrienko, and L. M. Vasil'eva	922	1165
Mechanism of the Radiolysis of Aqueous Solutions of DNA—N. V. Zakatova and V. A. Sharpatyi	926	1378
Standard Heat of Formation of Hafnium Dioxide—A. N. Kornilov and I. M. Ushakova	930	1382
NMR Study of Molecular Rotation in Solid d-Camphor at High Pressures—B. I. Obmoin, N. K. Moroz, and I. A. Belitskii	933	1385
Colloidal Solution of Metals in Water—K. S. Ramm, S. Ya. Frenkel', and E. S. Roskin	935	1388

Volume 201, Numbers 1-3

November, 1971

Optimum Bond Energies between the Catalyst and the Reactants and Products of a Catalytic Reaction—G. K. Boreskov	939	126
Reasons for Polymer-Polymer Adhesion—S. S. Voyutskii, Yu. D. Kuptsov, and Yu. S. Maloshuk	944	130
Formation and Conversion of Radicals in Glucose Polymers on γ Radiolysis—S. I. Gol'din, V. A. Sharpatyi, and S. V. Markevich	947	133
Magnetic Screening of F^{19} Nuclei in Tetrahedral and Octahedral Fluorides of Nontransition Elements—M. M. Gofman, E. L. Rozenberg, and M. E. Dyatkina	951	137
A Study of the Deformation Mechanism of Polypyromellitimide by the Thermodynamic Method—E. G. Lur'e, V. V. Kovriga, and M. L. Lebedinskaya	955	141
Flame Propagation through a Suspension in a Gas—É. N. Rumanov and B. I. Khaikin	957	144
Potential Dependence of Adsorption Pseudocapacitance in the Case Where the Temkin Isotherm Applies—A. I. Sotnikov, O. A. Esin, and N. M. Simkin	961	148
Vacancy Formation in Filamentary Copper Crystals—B. S. Bokshtein	964	375
An Infrared Spectroscopic Study of the Chemisorption of Butenes on Cuprous Oxide Catalyst—S. V. Gerei, É. V. Rozhkova, and Ya. B. Gorokhovatskii	968	379
Theory of the Motion of Moderately Large Volatile Aerosol Particles in Inhomogeneous Gases—B. V. Deryagin, Yu. I. Yalamov, and V. S. Galoyan	972	383
New Method of Determining the Coefficient of Internal Diffusion in an Adsorbent Granule Taking into Account the Form of the Adsorption Isotherm—P. P. Zolotarev, M. M. Dubinin, and I. T. Erashko	975	386
Triplet-Triplet Absorption Spectrum of Phenanthrene in the UV Region. Determination of the Extinction Coefficient of the Triplet-Triplet Absorption—Yu. I. Kiryukhin and Kh. S. Bagdasar'yan	978	389
N^{14} and Cl^{35} NQR Spectra in Amides of Pentavalent Phosphorus Acids—D. Ya. Osokin, I. A. Safin, and I. A. Nuretdinov	981	393
The Electronic Mechanism of Alkali Promotion in Catalyzed Ammonia Synthesis—L. A. Rudnitskii and M. G. Berengarten	984	396
Application of the Cluster Model to Describe the Composition-Property Relation in Binary Liquid Metal Systems—B. I. Sergin, N. A. Vatolin, and A. N. Men'	988	400

Catalytic Activity of Nickel, Purified in Ultrahigh Vacuum—M.S. Kharson and S. L. Kiperman . .	992	404
Mechanism of the Radiation-Chemical Oxidation of Hexavalent Plutonium to Heptavalent in Alkaline Aqueous Solutions—F. A. Zakharova, A. K. Pikaev, M. M. Orlova, A. D. Gel'man, and V. I. Spitsyn	996	636
Structure of the Phase Diagram of the System In—Sb at High Pressure—I. I. Kornilov, A. Ya. Shinyaev, D. B. Chernov, and G. I. Khokhlova	999	639
An Investigation of the Mechanochemical Phenomena in Processes of Boundary Friction —R. F. Kokhan, N. P. Sokolova, A. A. Kanaev, S. Ya. Veiler, and P. A. Rebinder	1002	643
Influence on Nonretarding Molecular Forces on the Coagulation and Condensation Growth of Particles of Highly Disperse Aerosols—A. G. Sutugin	1006	647

Volume 201, Numbers 4-6 December, 1971

The Dimensions of a Hydrogen Atom in Semiconductors and Dielectrics — D. G. Andrianov, Yu. V. Obukhov, V. G. Firsov, and V. I. Fistul'	1009	884
The Catalytic Activity of Copper-Containing Zeolites with Respect to the Oxidation of CO — G. K. Boreskov, N. N. Bobrov, N. G. Maksimov, V. F. Anufrienko, K. G. Ione, and N. A. Shestakova	1012	887
Information Properties of Thin Layers of Adsorbed Water — G. I. Distler and V. V. Moskvina	1016	891
Metastable Structural States in the Dissociation of Solid Solutions in the Alloys Co—Be and Co—Be—Ta — M. I. Zakharova, V. V. Korchazhkin, and V. V. Moshkov	1020	894
Chemical Polarization of Nuclei in the Products of Certain Reactions of Diazo Compounds and the Mechanism of These Reactions — A. F. Levit, I. P. Gragerov, and A. L. Buchachenko	1023	897
Spectroscopic Investigation of Intermediate Active Particles Which Have Been Stabilized in Inert Matrices As a Method of Studying the Mechanism of Chemical Reactions — A. K. Mal'tsev, R. G. Mikaelyan, and O. M. Nefedov	1027	901
Structural Micrononuniformities in Liquid Metals — I. A. Novokhatskii and V. I. Arkharov	1031	905
Effect of the Conditions of Crystallization and Electrolysis on the Optical Properties of Calcite — V. M. Sergeev, G. P. Barsanov, O. V. Kononov, and Yu. V. Pogodin	1035	909
Forms of Adsorbed and Structural Water on Surfaces of Dispersed Silicas — V. A. Tertykh, V. V. Pavlov, V. M. Mashchenko, and A. A. Chuiko	1038	913
Structure and Relaxation in Elastomers — G. M. Bartenev and N. M. Lyalina	1042	1130
PHYSICAL CHEMISTRY		
Temperature Dependence of the Adsorption Selectivity Coefficient of H ₂ and D ₂ on NaA Zeolite Taking into Account the Ortho-, Para- Composition — Yu. P. Blagoi, G. G. Zhyn', B. N. Zimoglyad, and G. O. Chuprina	1046	1134
Formation of Paramagnetic Centers in Green Leaves by the Action of Light of Wavelengths Greater than 725 mμ — R. Bokhman, L. A. Blyumenfel'd, A. K. Kukushkin, and É. K. Ruuge	1049	1138
X-Ray Studies of the Conversion of Acrylamide and Propionamide at High Pressure in Conjunction with Deformation Shear — L. A. Bykovskaya, A. A. Zharov, A. S. Kagan, A. G. Kazakevich, and N. S. Enikolopyan	1051	1140
Influence of the Oriented Polymerization Effect on the Magnitude of the Total Activation Energy of the Radiation Polymerization Process from the Gaseous Phase on Polymer Bases — A. V. Vlasov, L. I. Malakhova, N. V. Mikhailov, and B. L. Tsetlin	1053	1143
Complex Compounds of Indium and Cerium (III) and Aromatic Schiff Bases — E. P. Trailina, A. V. Leshchenko, S. S. Lyapina, G. A. Petrova, I. I. Danilicheva, and V. I. Spitsyn	1055	1145
The Fractionation of Carbon Isotopes in the Physicochemical Synthesis of Diamond from Gas — D. V. Fedoseev, É. M. Galimov, V. P. Varnin, V. S. Prokhorov, and B. V. Deryagin	1059	1149

Pulse Radiolysis of Aqueous Solutions Saturated with Nitrous Oxide and Hydrogen — T. A. Frunze and V. N. Shubin	1061	1151
Influence of the Reaction between Copper Complexes and the Solvent on the Electron Spin Resonance Spectra in Solution — A. A. Shklyayev and V. F. Anufrienko	1064	1154
NMR Study of the Complex Formation during the Stereospecific Propylene Oxide Polymerization — A. N. Shupik, N. V. Ptitsyna, K. I. Zamaraev, and K. S. Kazanskii	1068	1158
Peculiarities of the Mechanism of the Catalytic Action of Amines in Reactions of Hydrogen Transfer — V. V. Yushina, G. N. Fadeev, and L. A. Nikolaev	1072	1162
Concentration Fluctuations in Potassium Silicate Glasses — N. S. Andreev, N. A. Bokov, and G. G. Boiko	1074	1375
Heterogeneous and Homogeneous Stages of the Decomposition of Isopropylbenzene Hydroperoxide in the Presence of Metal Oxides — A. Ya. Valendo, Yu. D. Morikov, É. A. Blyumberg, and N. M. Émanué'l'	1077	1378
Cyclization in Cross-Linked Polymers — V. I. Irzhak, L. I. Kuzub, and N. S. Enikolopyan,	1080	1382
Rotational and Translational Diffusion and Local Radical Concentrations in Liquids and Polymers — A. L. Kovarskii, A. M. Vasserman, and A. L. Buchachenko	1083	1385
The Effect of Mass Transfer in the Gas Phase on the Operation of a Fuel Element — N. S. Lidorenko and V. A. Onishchuk	1087	1389
Reduction of Fermium to the Divalent State in Aqueous Ethanol Chloride Solutions — N. B. Mikheev, V. I. Spitsyn, A. N. Kamenskaya, B. A. Gvozdev, V. A. Druin, I. A. Rumer, R. A. D'yachkova, N. A. Rozenkevich, and L. N. Auérman	1091	1393
Change in Parameters of the EPR Signal of Plastocyanin under the Influence of Some Denaturing Agents — R. M. Nalbandyan, A. A. Mutushkin, and K. V. Pshenova	1094	1396
The Effect of Small Concentrations of Surfactants on the Kinetics of the Evaporation of the Main Component — P. I. Ozhegov, A. V. Merzlyakov, and L. L. Kunin	1097	1399
Relationship between Normal and Tangential Stresses and Reversible Deformation in the Pre-Steady-State Stage of the Deformation of Concentrated Solutions of Polymers in the Range of High Deformation Rates — A. A. Trapeznikov and T. I. Korotina	1099	1402
Conditions for the Appearance of Polarographic Maxima of the Third Kind — A. N. Frumkin, E. V. Stenina, N. V. Nikolaeva-Fedorovich, G. N. Petukhova, V. A. Yusupova, and É. A. Shokova	1103	1406
The Heisenberg Model of Spin Exchange and the Theory of Paramagnetic Resonance in Trimeric Clusters — B. S. Tsukerblat, M. I. Belinskii, and A. V. Ablov	1107	1410
INDEX		
Author Index, Volumes 196-201, 1971	1113	
Tables of Contents, Volumes 196-201, 1971	1119	

11-11-11

